

WHAT IS CLAIMED IS:

1. An entertainment unit for a vehicle, comprising:
an assembly housing adapted to mount against an
5 interior surface of the vehicle;
a bus adapted to couple at least one of video and audio
signals from each of a plurality of input devices;
at least one display device, houseable in said assembly
and operatively coupled to said bus, adapted to reproduce
10 the video signals; and
at least one wireless transmitter operatively coupled
to said bus, adapted to wirelessly and simultaneously
transmit a plurality of audio programs to a plurality of
wireless headphones.
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2. The entertainment unit according to claim 1,
wherein the wireless signals are at least one of radio
frequency and infrared signals.
3. The entertainment unit according to claim 1,
20 wherein the plurality of input devices comprise at least one
of a television tuner, a video cassette player (VCP), a

compact disk (CD) player, a digital video disk (DVD) player,
an AM/FM radio, and a video game player.

4. The entertainment unit according to claim 1,
5 wherein the plurality of input devices comprises an external
audio/video signal processor adapted to input at least one
of the audio signals and the video signals from an external
source.

10 5. The entertainment unit according to claim 4,
wherein the external source is a portable media device.

6. The entertainment unit according to claim 1,
further comprising signal processing facilities adapted to
15 perform at least one of signal processing and signal
conversion, with respect to at least one of the audio
signals and the video signals.

7. The entertainment unit according to claim 6,
20 wherein said signal processing facilities are adapted to
perform at least one of digital signal processing, encoding,
decoding, encrypting, decrypting, compressing,

decompressing, analog-to-digital conversion (ADC), digital-to-analog conversion (DAC), and error correction.

8. The entertainment unit according to claim 1,
5 wherein said at least one display device is mounted in said entertainment unit in one of a non-fixed configuration and a fixed configuration.

9. The entertainment unit according to claim 1,
10 wherein said at least one display device employs one of a liquid crystal display (LCD), light emitting diodes (LEDs), and a gas plasma.

10. The entertainment unit according to claim 9,
15 wherein said liquid crystal display is based upon one of active matrix technology and passive matrix technology.

11. The entertainment unit according to claim 1,
wherein said at least one display device employs touch
20 screen technology.

12. The entertainment unit according to claim 1,
wherein said at least one display device includes one of
picture-in-picture and split screen capability.

5 13. The entertainment unit according to claim 1,
wherein said at least one wireless transmitter comprises at
least one multiplexor adapted to select a specific input
device whose audio output is to be wirelessly transmitted to
a given one of the plurality of wireless headphone sets.

10 14. The entertainment unit according to claim 1,
wherein said at least one wireless transmitter is adapted to
wirelessly transmit the plurality of audio programs to each
of the plurality of wireless headphone sets as a left audio
15 channel and a right audio channel.

 15. The entertainment unit according to claim 14,
wherein the left audio channel and the right audio channel
correspond to different frequencies.

20 16. The entertainment unit according to claim 1,
wherein said at least one wireless transmitter is adapted to

wirelessly transmit the plurality of audio programs to each of the plurality of wireless headphone sets as a left audio channel and a right audio channel, each of the channels having a different frequency for each of the plurality of wireless headphone sets.

17. The entertainment unit according to claim 1, wherein said bus comprises a video bus and an audio bus.

18. The entertainment unit according to claim 17, wherein said video bus is coupled to said display device and said audio bus is coupled to said at least one wireless transmitter.

19. The entertainment unit according to claim 1, wherein said at least one wireless transmitter comprises an optical transmitting device and at least some of said plurality of wireless headphone sets comprise a photosensitive device.

20. The entertainment unit according to claim 1, wherein said at least one wireless transmitter and at least

some of said plurality of wireless headphone sets comprise an antenna.

21. The entertainment unit according to claim 1,
5 wherein at least some of said plurality of wireless
headphone sets comprise a digital-to-analog converter.

22. The entertainment unit according to claim 1,
wherein said at least one wireless transmitter is adapted to
10 transmit the plurality of audio programs based on Code-
Division Multiple Access (CDMA) technology.

23. The entertainment unit according to claim 22,
further comprising signal processing facilities, and wherein
15 at least some CDMA operations are performed by said signal
processing facilities.

24. The entertainment unit according to claim 22,
wherein left audio channels and right audio channels of the
20 plurality of audio programs are coded separately.

25. The entertainment unit according to claim 22,
wherein each of the plurality of wireless headphone sets
comprises a selector for selecting one of the plurality of
audio programs for audio reproduction.

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26. The entertainment unit according to claim 22,
wherein each of the plurality of wireless headphone sets
comprises at least one of a Walsh code generator and pseudo
random number (PN) sequence generator for decoding the
10 plurality of audio programs.

27. An entertainment unit for a vehicle, comprising:
an assembly housing adapted to mount against an
interior surface of the vehicle;

15 a video bus adapted to couple video signals from at
least some of a plurality of input devices;

an audio bus adapted to couple audio signals from at
least some of the plurality of input devices;

at least one display device, houseable in said assembly
20 and operatively coupled to said video bus, adapted to
reproduce the video signals; and

a wireless transmitter operatively coupled to said audio bus, adapted to wirelessly and simultaneously transmit a plurality of audio programs to a plurality of wireless headphone sets.

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28. An entertainment unit for a vehicle, comprising:
an assembly housing adapted to mount against an interior surface of the vehicle;

a bus adapted to couple audio signals from at least two input devices; and

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a wireless transmitter operatively coupled to said bus, adapted to wirelessly and simultaneously transmit the audio signals to at least two wireless headphone sets, so that each wireless headphone set receives an audio signal from a different one of the at least two input devices.

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